

Microcatheter-assisted Trabeculotomy for Primary Congenital Glaucoma After Failed Glaucoma Surgeries.

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Abstract

PURPOSE:

To evaluate the effectiveness of microcatheter-assisted trabeculotomy (MAT) to treat primary congenital glaucoma after failed previous glaucoma surgeries.

MATERIALS AND METHODS:

Retrospective, noncomparative, interventional case series conducted at Beijing Tongren Eye Center, China. Outcome measures were compared between 3 groups: successful and complete (≥ 330 degrees) MAT; successful and partial (< 330 degrees) MAT; or cases converted to traditional trabeculotomy when the Schlemm's canal could not be catheterized > 180 degrees. Success was defined as final intraocular pressure ≤ 21 mm Hg, with (qualified success) or without (complete success) glaucoma medications.

RESULTS:

In total, 74 eyes of 63 consecutive patients were included. MAT was performed in 50 eyes (67.6%). Postoperative intraocular pressure and number of glaucoma drops (17.7 ± 8.6 mm Hg, 0.6 ± 1.2 medications) was significantly less than the preoperative values (35.3 ± 7.2 mm Hg, 2.7 ± 0.8 medications; $P < 0.001$). Cumulative probabilities of qualified and complete success were 84.0% and 80.0% at 3-year follow-up with no difference between complete and partial trabeculotomies. MAT was not successfully performed in 24 eyes (32.4%), requiring conversion to traditional trabeculotomy and associated with greater incidence of previous surgeries ($P < 0.001$), earlier age of disease onset ($P = 0.024$) and worse corneal transparency ($P = 0.010$). Cumulative probabilities of qualified and complete success were 37.0% and 29.2% at 3-year follow-up.

CONCLUSIONS:

Both complete and partial MAT achieved significant pressure reduction in cases of primary congenital glaucoma with previous failed glaucoma surgeries in intermediate term.